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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/992,796	11/05/2001	Peng Cheng	042390P8122D	7807

7590 12/30/2003  
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EXAMINER  
FARAHANI, DANA

ART UNIT	PAPER NUMBER
2814	

DATE MAILED: 12/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	09/992,796		CHENG ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Dana Farahani		2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 October 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11, 14 and 16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-21 is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 12 and 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
     If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:  
         1. ☐ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
     \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
     a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other:  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-9 and 11 are rejected under 35 U.S.C. 103(a) as being anticipated by Muller et al., hereinafter Muller (U.S. Patent 4,674,319), previously cited, in view of Dhuler (US Patent 6,215,644), newly cited.

Regarding claim 1, Muller discloses in figure 2 a fixed charge plate (surface of the substrate) disposed in a substrate; a movable charge plate 24 disposed above the fixed charge plate; and a stiffener 50 affixed to a center portion of the movable charge plate.

Muller does not disclose a fixed actuator plate.

Dhuler discloses in figures 1 and 2, a fixed actuator plate 20. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further include a fixed actuator in the Muller structure in order to have a separate movement control of the movable plate in the Muller reference.

Regarding claims 2 and 3, note that the distance between the fixed charge plate and the stiffener is constant, while a distance between the fixed charge plate and the movable charge plate varies (see column 4, lines 1-26).

Regarding claim 4, the area of the fixed charger plate is larger than the movable plate.

Regarding claims 5-8, the movable charge plate has a solid surface plate 24 and a undulating configured suspension 20.

Regarding claim 9, means for moving the movable plate (that is source 38) is also provided (see column 4, lines 1-26).

Regarding claim 11, the means for suspending the movable charge plate comprises a flexible section of the movable charge plate.

3. Claims 10, 14, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muller in view of Dhuler, as applied to claim 9 above, and further in view of Miller (U.S. Patent 5,185,690), previously cited.

Regarding claim 10, Muller in view of Dhuler renders obvious the limitations in the claims, as discussed above, except for a flexible dielectric is used for suspending the movable plate.

Miller discloses in figure 16, and column 8, lines 17-36, that flexible dielectric layers 146 are used in the capacitor 144. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use flexible dielectrics as the suspension of the structure of Muller, since there would be solid mechanical support for the moveable plate in addition to adding to moving capacity of the movable plate.

Regarding claims 14 and 16, Muller discloses the limitation in the claim, as discussed above, except for a flexible dielectric is used in between the two plates.

Miller discloses in figure 16, and column 8, lines 17-36, that flexible dielectric layers 146 are used in the capacitor 144. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a flexible dielectric between the two plates of the capacitor in Muller structure in order to further change the capacity of the capacitor in the structure due to desired dielectric constants of the available dielectric layers.

***Allowable Subject Matter***

4. Claims 17-21 allowed.
5. Claims 12 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
6. The following is a statement of reasons for the indication of allowable subject matter:

The primary reason for indication of allowability of claims 12, 13, and 17-21 is the inclusion therein of the limitation that of the actuator plate.

***Response to Arguments***

7. Applicant's arguments with respect to the rejected claims have been considered but are moot in view of the new grounds of rejection.

***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dana Farahani whose telephone number is (703)305-1914. The examiner can normally be reached on M-F 9:00AM - 6:00PM.

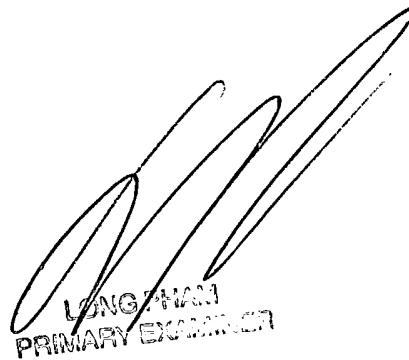
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael M Fahmy can be reached on (703)308-4918. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9318 for regular communications and (703)872-9319 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

D. Farahani  
December 26, 2003



LONG-THAN  
PRIMARY EXAMINER